

REMARKS

Reconsideration of the present application is respectfully requested in view of the following remarks. Prior to entry of this response, Claims 19-30 were pending in the application, of which Claims 19 and 29 are independent. Claims 16-17 were previously withdrawn from consideration. In the Office Action dated March 21, 2003, Claims 19-20, 24, and 27 were rejected under 35 U.S.C. §102(b), Claims 21-23, 25-26, and 28-30 were rejected under 35 U.S.C. §103(a), and the drawings were objected to. Following this response, Claims 19-30 remain in this application. Applicant hereby addresses the Examiner's rejections in turn.

I. **Amendment to the Specification**

The specification has been amended to recite claims to the benefit of European Patent Application No. 00124788.1, filed November 14, 2000, and U.S. provisional patent application serial number 60/249,463, filed November 20, 2000, and to correct a typographical error. Applicant respectfully submits that this amendment adds no new matter.

II. **Objection to the Drawings**

In the Office Action dated March 21, 2003, the Examiner objected to the drawings as including improper cross hatching. Subject to the approval of the Examiner, it is proposed to substitute FIGs. 1-3 and 5 (4 sheets) with the attached substitute FIGs. 1-3 and 5 (4 sheets). Applicant respectfully submits that substitute FIGs. 1-3 and 5 overcome this objection and add no new matter.

III. Rejection of the Claims Under 35 U.S.C. § 102(b)

In the Office Action, the Examiner rejected Claim 19 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,932,523 ("Fujikami"). Applicant respectfully traverses this rejection because *Fujikami* would not have led to the claimed invention.

Claim 19 is patentably distinguishable over the cited art in that it recites, for example, a superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so that gaps are circumferentially formed between adjacent tapes, wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the gaps.

In contrast, *Fujikami* at least does not teach or suggest partially filled gaps between adjacent tapes in a superconducting cable. The Examiner identifies material 70 in *Fujikami* as corresponding to the claimed non-superconducting material, but this material is provided to insulate the superconducting types in *Fujikami*'s cable. To perform its insulating function efficiently, the insulation material of *Fujikami* must logically be in direct contact with the superconducting tapes. Consequently, *Fujikami* neither discloses nor suggest a non-superconducting material partially filling gaps between adjacent tapes, as recited in Claim 19. For example, in the embodiment of FIG. 6, *Fujikami* illustrates insulation 50 (as with insulation 70 in FIG. 7) completely filling gaps between superconducting tapes 51.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4400
Fax 202.408.4400
www.finnegan.com

Accordingly, independent Claim 19 patentably distinguishes the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claim 19.

Dependent Claims 20-28 are also allowable at least for the reasons above regarding independent Claim 19, and by virtue of their dependency upon independent Claim 19. Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent Claims 20-28.

IV. Rejection of the Claims Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected Claim 29 under 35 U.S.C. § 103(a) as being unpatentable over *Fujikami* in view of U.S. Patent No. 4,184,042 ("*Vulis*"). Claim 29 has been amended, and Applicant respectfully submits that the amendment overcomes this rejection and adds no new matter.

Amended Claim 29 is patentably distinguishable over the cited art in that it recites, for example, a superconducting cable comprising a phase conductor including at least a first layer of tapes of superconducting material circumferentially wound side by side on a support at a first prefixed distance so that first gaps are circumferentially formed between adjacent tapes of the phase conductor wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps, and a return conductor including at least a second layer of tapes of superconducting material circumferentially wound on a support side by side at a second prefixed distance so that second gaps are circumferentially formed between adjacent tapes of the return conductor.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

In contrast with Claim 29 and as stated above, *Fujikami* at least does not teach or suggest partially filled gaps between adjacent tapes in a superconducting cable. For example, FIG. 6 of *Fujikami* discloses insulation 50 completely filling gaps between superconducting tapes 51. In order to perform its insulating function efficiently, insulation 50 of *Fujikami* must be in direct contact with superconducting tapes 51.

Furthermore, *Vulis* does not overcome *Fujikami*'s deficiencies. *Vulis* merely discloses an annular superconducting shield. Like *Fujikami*, *Vulis* at least does not teach or suggest a non-superconducting material interposed between adjacent tapes to partially fill the gaps.

Combining *Fujikami* with *Vulis* would not have led to the claimed invention because *Fujikami* and *Vulis*, either individually or in combination, at least do not disclose or suggest a non-superconducting material interposed between the adjacent tapes to partially fill the first gaps, as recited by amended Claim 29. Accordingly, independent Claim 29 patentably distinguishes the present invention over the cited art, and Applicant respectfully requests withdrawal of this rejection of Claim 29.

Dependent Claim 30 is also allowable at least for the reasons above regarding independent Claim 29, and by virtue of its dependency upon independent Claim 29. Accordingly, Applicant respectfully requests withdrawal of this rejection of dependent Claim 30.

V. Conclusion

In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the

pending claims. The preceding arguments are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability.

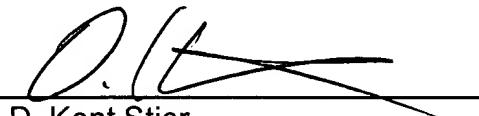
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: June 25, 2003

By:


D. Kent Stier
Reg. No. 50,640
(404) 653-6559

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com